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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/617,285

07/10/2003

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075834.00412

2601

7590

10/21/2004

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EXAMINER

HSIEH, SHIH WEN

ART UNIT

PAPER NUMBER

2861

DATE MAILED: 10/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/617,285	YAKURA ET AL.	
	Examiner	Art Unit	
	Shih-wen Hsieh	2861	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 7, 14, 15 are objected to because of the following informalities:

In regard to:

Claim 7:

Page 82, line 5, please change "in the direction" into "in a direction" to correct a minor lack of antecedent basis problem.

Page 82, lines 22-23, please change "and in the order of the rows" into "and in an order of the rows" to correct a minor lack of antecedent basis problem.

Claim 14:

Page 90, line 7, please change "in the direction" into "in a direction" to correct a minor lack of antecedent basis problem.

Page 90, lines 24-25, please change "and in the order of the rows" into "and in an order of the rows" to correct a minor lack of antecedent basis problem.

Claim 15:

Line 3, please change "the closing state" into "a closing state" to correct a minor lack of antecedent basis problem.

Please also correct the same as indicated above for corresponding method claims such as claim 25 etc.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1, 4, 8, 11, 19, 22, 26 and 29 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2 and 6 of U.S. Patent No. 6,637,856 B2 ('856). Although the conflicting claims are not identical, they are not patentably distinct from each other because both cases deal with a cleaning member associated with a capping device. Table below indicates comparison between claims to show the obviousness:

<u>10/617,285</u>	<u>6,637,856 B2</u>
1. An image forming apparatus forming an image on a recording medium by discharging ink from ink-discharge openings, comprising: A print head including ink-discharge surfaces having	1. An inkjet head comprising: an ink cartridge for holding ink of one color or of a plurality of colors therein; a print head including an ink discharge surface including an ink discharge hole

the ink-discharge openings formed therein; a cylindrical cleaning member composed of an elastic material; moving means for moving the cleaning member and the print head relative to each other while keeping the circumferential surface the cleaning member contact with the ink-discharge surfaces the print head; drive control means for controlling the moving means; cap member for protecting the ink-discharge surfaces of the print head; and cap opening/closing means for opening and closing the cap member, wherein, when the cap member is opened by the cap opening/closing means, by driving the moving means with control the drive control means so as to move the cleaning member and print head relative to each other while keeping the circumferential surface of the cleaning member in contact with the ink-discharge surfaces, ink the ink-discharge openings is sucked.

4. An image forming apparatus for forming an image on a recording medium by discharging ink from ink-discharge openings, comprising: a print head including ink-discharge surfaces having the ink-discharge openings formed therein; a cylindrical cleaning member composed of an elastic material; a cap member for housing the cleaning member therein. and for protecting the ink-discharge surfaces of the print head; cap opening/closing means for opening and closing the cap member and for moving the cleaning member and the print head relative to each other in accordance with the opening operation of the cap member while keeping the circumferential surface the cleaning

for discharging ink supplied from the ink cartridge; a head cap, which moves relative to and is removably mounted to the print head, for protecting the ink discharge surface of the print head; and a cleaning member, provided at a print-head side of the head cap in a longitudinal direction of the print head, for cleaning the ink discharge surface of the print head.

2. An inkjet head according to claim 1, wherein the head cap is moved in a relative manner in a direction orthogonal to a longitudinal direction of the ink discharge surface of the print head in order to clean the ink discharge surface by the cleaning member which moves along with the head cap.

6. An inkjet head according to claim 1, wherein the cleaning member is formed with a circular cylindrical shape that comes into contact with the entire length of the ink discharge surface of the print head, and is removably held by the head cap.

<p>member in contact with the ink-discharge surfaces of the print head; and drive control means for controlling the cap opening/closing means, wherein, when the cap member is opened by the cap opening/closing means, by driving the cap opening/closing means with control of the drive control means so as to move the cleaning member and the print head relative to each other while keeping the circumferential surface of the cleaning member in contact with ink-discharge surfaces, ink in the ink-discharge openings is sucked.</p> <p>8. An image forming apparatus for forming an image on a recording medium by discharging ink from ink-discharge openings, comprising: a print head including ink-discharge surfaces having the ink-discharge openings formed therein; a cylindrical cleaning member composed of an elastic material; moving means for moving the cleaning member and the print head relative to each other while keeping the circumferential surface of the cleaning member in contact with ink-discharge surfaces of the print head; drive control means for controlling the moving means; a cap member for protecting the ink-discharge surfaces of the print head; and cap opening/closing means for opening and closing the cap member, wherein, when the cap member is closed by the cap opening/closing means, by driving the moving means with control of the drive control means so as to move the cleaning member and the print head relative to each other while keeping the circumferential surface of the cleaning member in contact with the ink-discharge surfaces, ink in the ink-</p>	
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discharge openings is sucked.

11. An image forming apparatus for forming an image on a recording medium by discharging ink from ink-discharge openings, comprising: a print head including ink-discharge surfaces having the ink-discharge openings formed therein; a cylindrical cleaning member composed of an elastic material; a cap member for housing the cleaning member therein and for protecting the ink-discharge surfaces of the print head; cap opening/closing means for opening and closing the cap member and for moving the cleaning member and the print head relative to each other in accordance with the closing operation of the cap member while keeping the circumferential surface of the cleaning member in contact with the ink-discharge surfaces of the print head; and drive control means for controlling the cap opening/closing means, wherein, when the cap member is closed by the cap opening/closing means, by driving the cap opening/closing means with control of the drive control means so as to move the cleaning member and the print head relative to each other while keeping the circumferential surface of the cleaning member in contact with the ink-discharge surfaces, ink in the ink-discharge openings is sucked.

In reviewing the claims in the above table and also the corresponding drawings, such as fig. 2 in both cases, the instant application and the patent ('856) claim the same apparatus, namely, a capping device used to cover the head and a cleaning device used to clean a surface of the head, the cleaning device in this instant application is

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particularly in the form of a roller. Subject matters such as cap, cleaning member, which moves along with the movement of the cap are the same. Others features such as:

moving means, which is explicitly recited in the instant application, while is not in patent ('856), and is obvious in an ink jet printing apparatus;

drive control means and cap opening/closing means not recited in patent ('856) are obvious and also essential components in an ink jet printing apparatus.

Therefore, all of the subjects matters and limitations recited in claims 1, 4, 8 and 11 of the instant application are obvious over those in claims 1, 2 and 6 in the patent ('856). Similarly, the reverse is also true.

Claims 19, 22, 26 and 29 are method claims corresponding to apparatus claims 1, 4 and 8 respectively and are also rejected based on the method steps are deemed to be made obvious by the functions of the structure in the combination discussed above.

4. Claims 2, 3, 5-7, 9, 10, 12-14, 20, 21, 23-25, 27, 28 and 30-32 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3 and 6 of U.S. Patent No. 6,637,856 B2 ('856). Although the conflicting claims are not identical, they are not patentably distinct from each other because both cases deal with a cleaning member associated with a capping device.

Table below indicates comparison between claims to show the obviousness:

<u>10/617,285</u>	<u>6,637,856 B2</u>
2. An image forming apparatus for forming an image on a recording medium by discharging ink from ink-	1. An inkjet head comprising: an ink cartridge for holding ink of one color

discharge openings, comprising: a print head including ink-discharge surfaces having the ink-discharge openings formed therein; a cylindrical cleaning member composed of an elastic material; moving means for moving the cleaning member and the print head relative to each other while keeping the circumferential surface of the cleaning member in contact with the ink-discharge surfaces of print head; drive control means for controlling the moving means; discharge control means for controlling a discharge operation of ink from the ink-discharge openings formed in the discharge surfaces; a cap member for protecting the ink-discharge surfaces of the print head; and cap opening/closing means for opening and closing the cap member, wherein, when the cap member is opened by the cap opening/closing means, by driving the moving means with control of the drive control means so as to move the cleaning member and the print head relative each other while keeping the circumferential surface of the cleaning member in contact with the ink-discharge surfaces, ink in the ink-discharge openings is sucked, and after the moving of the cleaning member on the ink-discharge surfaces, ink is preliminarily discharged from ink-discharge openings with control of the discharge control means.

3. An image forming apparatus for forming an image on a recording medium by discharging ink from ink-discharge openings, comprising: print head including ink-discharge surfaces having ink-discharge openings formed therein; cylindrical cleaning member composed of an elastic material;

or of a plurality of colors therein; a print head including an ink discharge surface including an ink discharge hole for discharging ink supplied from the ink cartridge; a head cap, which moves relative to and is removably mounted to the print head, for protecting the ink discharge surface of the print head; and a cleaning member, provided at a print-head side of the head cap in a longitudinal direction of the print head, for cleaning the ink discharge surface of the print head.

2. An inkjet head according to claim 1, wherein the head cap is moved in a relative manner in a direction orthogonal to a longitudinal direction of the ink discharge surface of the print head in order to clean the ink discharge surface by the cleaning member which moves along with the head cap.

3. An inkjet head according to claim 1, wherein the print head **preliminarily discharges** ink from the ink discharge hole before or after cleaning the ink discharge surface by the cleaning member.

6. An inkjet head according to claim 1, wherein the cleaning member is formed with a circular cylindrical shape that comes into contact with the entire length of the ink discharge surface of the print head, and is removably held by the head cap.

moving means for moving the cleaning member and the print head relative to each other while keeping the circumferential surface of the cleaning member in contact with the ink-discharge surfaces of the print head; drive control means for controlling the moving means; discharge control means for controlling a discharge operation of ink from the ink-discharge openings formed in the discharge surfaces; a cap member for protecting the ink-discharge surfaces of the print head; and cap opening/closing means for opening and closing the cap member, wherein, when the cap member is opened by the cap opening/closing means, by performing a discharge operation of ink from the ink-discharge openings with control of the discharge control means, ink is preliminarily discharged from the ink-discharge openings.

5. An image forming apparatus for forming an image on a recording medium by discharging ink from ink-discharge openings, comprising: a print head including ink-discharge surfaces having the ink-discharge openings formed therein; a cylindrical cleaning member composed of an elastic material; a cap member for housing the cleaning member therein and for protecting the ink-discharge surfaces of the print head; cap opening/closing means for opening and closing the cap member and for moving the cleaning member and the print head relative to each other in accordance with the opening operation of the cap member while keeping the circumferential surface of the cleaning member in contact with the ink-discharge surfaces of the print head;

drive control means for controlling the cap opening/closing means; and discharge control means for controlling a discharge operation of ink from the ink-discharge openings formed in the discharge surfaces, wherein, when the cap member is opened by the cap opening/closing means with control of the drive control means so as to move the cleaning member and the print head relative to each other while keeping of the circumferential surface of the cleaning member in contact with ink-discharge surfaces, ink in the ink-discharge openings is sucked, and after the moving of the cleaning member on the ink-discharge surfaces, ink is preliminarily discharged from the ink-discharge openings with control of the discharge control means.

6. An image forming apparatus for forming an image on a recording medium by discharging ink from ink-discharge openings, comprising: a print head including ink-discharge surfaces having ink-discharge openings formed therein; a cylindrical cleaning member composed of elastic material; a cap member for housing the cleaning member therein and for protecting the ink discharge surfaces of the print head; cap opening/closing means for opening and closing the cap member and for moving the cleaning member and the print head relative to each other in accordance with the opening operation of the cap member while keeping the circumferential surface of the cleaning member in contact with the ink-discharge surfaces of the print head; drive control means for controlling the cap opening/closing means; and discharge control means controlling discharge operation of ink

from the ink-discharge openings formed in the discharge surfaces, wherein, when the cap member is opened by the cap opening/closing means, by performing a discharge operation from the ink-discharge openings with control of the discharge control means, ink preliminarily discharged from the ink-discharge openings.

7. An image forming apparatus for forming an image on a recording medium by discharging ink from ink-discharge openings, comprising: a print head including ink-discharge surfaces having a plurality of rows of the ink-discharge openings formed therein for a corresponding plurality of colors; a cylindrical cleaning member composed of an elastic material; a cap member for housing the cleaning member therein and for protecting ink-discharge surfaces of the print head; cap opening/closing means for opening and closing of the cap member and for moving the cleaning member and the print head relative to each other in the direction orthogonal to the plurality of rows of the ink-discharge openings for the respective colors in accordance with the opening operation of the cap member while keeping the circumferential surface of the cleaning member in contact with the ink-discharge surfaces of the print head; drive control means for controlling the cap opening/closing means; and discharge control means for controlling a discharge operation of ink from the ink-discharge openings formed in the discharge surfaces, wherein, when the cap member is opened by the cap opening/closing means, by driving the cap opening/closing means with control

of the drive control means so as to move the cleaning member and the print head relative to each other while keeping the circumferential surface of the cleaning member in contact with the ink-discharge surfaces, ink the ink-discharge openings is sucked, and in the order of the rows, over which the cleaning member passes with control of the discharge control means, of the ink-discharge openings for the corresponding colors formed in the ink-discharge surfaces, ink is preliminarily discharged from the ink-discharge openings with control of the discharge control means.

9. An image forming apparatus for forming an image on a recording medium by discharging ink from ink-discharge openings, comprising: a print head including ink-discharge surfaces having the ink-discharge openings formed therein; a cylindrical cleaning member composed of an elastic material; moving means for moving the cleaning member and the print head relative to each other while keeping the circumferential surface of the cleaning member in contact with the with the ink-discharge surfaces of the print head; drive control means for controlling the moving means; discharge control means for controlling a discharge operation of ink from the ink-discharge openings formed the discharge surfaces; a cap member for protecting the ink-discharge surfaces of the print head; and cap opening/closing means for opening and closing the cap member, wherein, when the cap member is closed by the cap opening/closing means, by driving the moving means with control of the drive control means so as to move the

cleaning member and the print head relative to each other while keeping the circumferential surface of the cleaning member in contact with the ink-discharge surfaces, ink in the ink-discharge openings is sucked, and after the moving of the cleaning member on ink-discharge surfaces, ink is preliminarily discharged from the ink-discharge openings with control of the discharge control means.

10. An image forming apparatus for forming an image on a recording medium by discharging ink from ink-discharge openings, comprising: a print head including ink-discharge surfaces having the ink-discharge openings formed therein; a cylindrical cleaning member composed of an elastic material; moving means for moving the cleaning member and the print head relative to each other while keeping the circumferential surface of the cleaning member in contact with the ink-discharge surfaces of the print head; drive control means controlling the moving means; discharge control means for controlling a discharge operation of ink from the ink-discharge openings formed in the discharge surfaces; a cap member for protecting the ink-discharge surfaces of the print head; and cap opening/closing means for opening and closing the cap member, wherein, when the cap member is closed by the cap opening/closing means, by performing a discharge operation of ink from the ink-discharge openings with control of the discharge control means, ink is preliminarily discharged from the ink-discharge openings.

12. An image forming apparatus for forming an image on a recording

medium by discharging ink from ink-discharge openings, comprising: a print head including ink-discharge surfaces having ink-discharge openings formed therein; a cylindrical cleaning member composed of an elastic material; a cap member for housing the cleaning member therein and for protecting the ink-discharge surfaces of the print head; cap opening/closing means for opening and closing the cap member and for moving the cleaning member and the print head relative to each other in accordance with the closing operation of the cap member while keeping the circumferential surface the cleaning member in contact with the ink-discharge surfaces of the print head; drive control means for controlling the cap opening/closing means; and discharge control means for controlling a discharge operation of ink from the ink-discharge openings formed in the discharge surfaces, wherein, when the cap member closed by the cap opening/closing means, by driving the cap opening/closing means with control the drive control means so as to move the cleaning member and the print head relative to each other while keeping the circumferential surface of cleaning member in contact with the ink-discharge surfaces, ink in the ink-discharge openings is sucked, and after the moving of the cleaning member on the ink-discharge surfaces, ink is preliminary discharged from the ink-discharge openings with control of the discharge control means.

13. An image forming apparatus for forming an image on a recording medium by discharging ink from ink-discharge openings, comprising: a print head including ink-discharge surfaces

having the ink-discharge openings formed therein; a cylindrical cleaning member composed of an elastic material; a cap member for housing the cleaning member therein and for protecting the ink-discharge surfaces of the print head; cap opening/closing means for opening and closing the cap member and for moving the cleaning member and the print head relative to each other in accordance with the closing operation of the cap member while keeping the circumferential surface of the cleaning member in contact with the ink-discharge surfaces of the print head; drive control means for controlling the cap opening/closing means; and discharge control means for controlling a discharge operation of ink from the ink-discharge openings formed in the discharge surfaces, wherein, when the cap member is closed by the cap opening/closing means, by performing a discharge operation ink from ink-discharge openings with control of the discharge control means, ink preliminarily discharged from the ink-discharge openings.

14. An image forming apparatus for forming an image on a recording medium by discharging ink from ink-discharge openings, comprising: a print head including ink-discharge surfaces having a plurality of rows of the ink-discharge openings formed therein for a corresponding plurality of colors; a cylindrical cleaning member composed of an elastic material; a cap member for housing the cleaning member therein and for protecting ink-discharge surfaces of the print head; cap opening/closing means for opening and closing the cap member and for moving

<p>the cleaning member and the print head relative to each other in the direction orthogonal the plurality of rows of the ink-discharge openings for the respective colors in accordance with the closing operation of the cap member while keeping the circumferential surface of the cleaning member in contact with the ink-discharge surfaces the print head; drive control means for controlling the cap opening/closing means; and discharge control means for controlling discharge operation of ink from the ink-discharge openings formed in the discharge surfaces, wherein, when the cap member is closed by the cap opening/closing means, by driving the cap opening/closing means with control of the drive control means so as to move the cleaning member and the print head relative to each other while keeping the circumferential surface of the cleaning member in contact with the ink-discharge surfaces, ink-discharge openings is sucked, and in the order of the rows, over which the cleaning member passes with control of the discharge control means, of the ink-discharge openings for the corresponding colors formed in the ink-discharge surfaces, ink is preliminarily discharged from the ink-discharge openings with control of the discharge control means.</p>	
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The discussion of obviousness between these claims are the same as those for claims 1, 4, 8 and 11 of the instant application above, except claims 2, 3, 5-7, 9, 10 and 12-14 of the instant application has a "discharge control means", which is not recited in

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claims 1, 4, 8 and 11 of patent ('856). However, the preliminary discharge recited in claim 3 of patent ('856) implicitly suggests a "discharge control means", because such a "discharge control means" is used not only in normal printing, but also in the preliminary discharge, in which the discharged ink is not used in printing.

Claims 20, 21, 23-25 and 27-32 are method claims corresponding to apparatus claims 2, 3, 5-7 and 9-14 respectively and are also rejected based on the method steps are deemed to be made obvious by the functions of the structure in the combination discussed above.

Also for all of the claims above (claims 1-14 and claims 19-32), print head is cleaned when cap is open or when cap is closed. This is obvious. Because cleaning of the print head is based on a relative movement of the cleaning member and the print head, and in either the cap is open or close case, such relative movement is accomplished. Preliminary discharge can be performed in either cap is in close situation or can be performed without a cap, i.e., the cap is open.

5. Claim 18/2/3/5/7/9/10/12-14 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 4 of U.S. Patent No. 6,637,856 B2 ('856). Although the conflicting claims are not identical, they are not patentably distinct from each other because both cases deal with a cleaning member associated with a capping device. Table below indicates comparison between claims to show the obviousness:

<u>10/617,285</u> 18. The image forming apparatus according to any one of claims 2, 3, 5 to 7, 9, 10, and 12 to 14, wherein an ink receiver discharged from ink-discharge openings is provided in the cap member.	<u>6,637,856 B2</u> 4. An inkjet head according to claim 3, further comprising an ink receiving section, provided at an inner side of the head cap, for receiving the ink preliminarily discharged from the ink discharge hole.
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The obviousness between these two claims is clearly and explicitly as indicated above.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 15-17/1 to 14 and 33-35/19 to 32 are rejected under 35 U.S.C. 103(a) as being obvious over Nishi et al. (US Pat. No. 6,637,856 B2).

The applied reference has a common Assignee (Sony) with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(I)(1) and § 706.02(I)(2). Both cases deal with a cleaning member associated with a capping device.

In regard to:

Claims 15/1-14, 16/1-14 and 17/1-14:

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The image forming apparatus according to any one of claims 1 to 14, wherein the cap member opened and closed when closing state of the cap member has continued for a predetermined time interval (claim 14);

The image forming apparatus according to any one of claims 1 to 14, wherein the cap member closed after an operation of forming an image on a recording sheet (claim 16); and

The image forming apparatus according to any one of claims 1 to 14 wherein the cap member closed unless an image forming operation is performed for a predetermined time interval after an operation of forming an image on recording sheet (claim 17).

Rejection:

These claims depend on rejected base claims respectively and are also rejected based on:

1. The timing of closing/opening of the capping device is well known in the art.
2. The manner of operating the device, in this case, the closing/opening of the capping device, does not differentiate apparatus claim from the prior art, refer to MPEP 2114.

Claims 33/19-32, 34/19-32 and 35/19-32 (method claims):

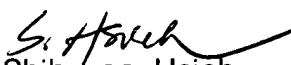
These are method claims corresponding to apparatus claims 15-17 respectively, and are rejected based on the method steps are deemed to be made obvious by the functions of the structure in the combination discussed above.

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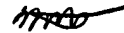
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shih-wen Hsieh whose telephone number is 571-272-2256. The examiner can normally be reached on 7:30AM -5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, S D Meier can be reached on 571-272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). **SHIH-WEN HSIEH**
PRIMARY EXAMINER


Shih-wen Hsieh
Primary Examiner
Art Unit 2861

SWH


Oct. 20, 2004